

Results of Double-Star Measures with the 8-inch Equatorial at Windsor, N. S. Wales, in 1891. By J. Tebbutt.

Ref. No.	Star.	Observed Magnitude.	Approx. Place of Star.	Fraction of Year.	Position Angle.	No. of Obs.	Mag. Power.	Hour-Angles. to 5.
1	<i>p</i> Eridani	6, 6	1 36 56° 45'	.739	....745	10 " 30	170	2 30 E 2 15 E 5
2	,	6, 6	"	.745	225° 2	10	300	2 51 E 2 37 E 5
3	,	"	"	.750	225° 6	10	300	3 43 E 3 31 E 3
4	,	6, 6	"	.758	225° 6	10	...	2 37 E 2 21 E 5
5	,	6, 6	"	.758	...	10	...	2 4 E 1 47 E 5
6	,	"	"	.805	...	10	170	3 44 E 3 26 E 3
7	,	"	"	.966	227° 9	10	...	2 19 W 2 40 W 3
8	,	"	"	.966	...	7 63	7	170 2 44 W 2 58 W 3
9	Lalande, 4219	8, 8	2 11 18 44	.745	335° 6	10	...	300 2 32 E 2 20 E 4
10	,	8, 8	"	.745	337° 2	10	...	230 2 20 E 2 5 E 4
11	<i>α</i> Centauri	...	14 32 60 23	.515	205° 8	10	...	300 2 56 E 2 43 E 4
12	,	"	"	.559	207° 6	10	...	230 0 52 W 1 9 W 2
13	,	"	"	.561	205° 9	10	...	230 2 29 E 2 20 E 4
14	,	"	"	.561	...	19° 10	10	170 1 51 E 1 34 E 3
15	,	"	"	.583	...	19° 40	10	170 1 0 E 0 40 E 2
16	,	"	"	.583	205° 4	10	...	300 0 36 E 0 0 3
17	,	"	"	.613	205° 0	10	...	230 0 47 E 0 38 E 3
18	,	"	"	.613	...	18° 91	10	170 0 38 E 0 14 E 3
19	,	"	"	.616	...	19° 69	10	170 0 25 E 0 12 E 3
20	,	"	"	.635	207° 5	10	...	300 4 8 W 4 22 W 3

Ref. No.	Star.	Observed Magnitude.	Approx. Place			Fraction of Year.	Position Angle.	No. of Obs.	Distance.	No. of Obs.	Mag. Power.	Hour-Angles.	Weight, 1 to 5.
			R. A.	Dec.	S.								
21	α Centauri	...	14 32	60 ° 23'	'	.646	206°1	10	"	...	500	3 2 W	3 25 W 4
22	"	...	"	"	"	.646	...	...	19°85	6	170	3 31 W	3 52 W 3
23	"	...	"	"	"	.654	...	...	19°41	10	170	1 35 W	2 3 W 2
24	"	...	"	"	"	.657	...	...	19°43	10	170	1 34 W	1 54 W 3
25	"	...	"	"	"	.657	...	...	19°61	5	170	2 47 W	2 57 W 4
26	"	...	"	"	"	.663	...	...	19°23	5	170	1 25 E	1 7 E .3
27	"	...	"	"	"	.663	...	...	19°24	10	170	0 3 W	0 14 W 4
28	39 Ophiuchi	6, 8	17 11	24 8	'	.695	...	...	10°57	5	170	3 21 W	3 36 W ...
29	"	...	"	"	"	.726	...	...	10°53	7	170	2 45 W	2 59 W ...
30	"	...	"	"	"	.726	354°9	10	...	...	300	3 21 W	3 43 W ...
31	"	...	"	"	"	.739	353°8	10	...	...	140	2 40 W	2 51 W 5
32	κ Cor. Aust.	6, 7	18 26	38 48	'	.758	358°3	6	...	...	320	1 6 E	0 28 E 4
33	Brisb. 6556	...	18 54	37 13	'	.635	277°4	10	...	...	140	0 39 E	0 28 E 5
34	"	...	"	"	"	.638	280°5	10	...	...	230	3 29 W	3 39 W 5
35	"	7, 7	"	"	"	.745	...	...	51.01	8	170	2 15 W	2 39 W 5
36	"	7, 7	"	"	"	.745	280°6	10	...	...	300	3 22 W	3 36 W 5
37	"	...	"	"	"	.747	281°4	10	...	...	300	1 52 W	2 5 W 5
38	"	...	"	"	"	.750	280°8	10	...	...	300	1 44 W	1 57 W 3
39	λ 5075	8, 8	18 54	63 56	'	.758	0.011	10	...	...	300	3 28 W	3 51 W 4
40	γ Cor. Aust.	...	18 59	37 13	'	.635	...	...	157.1	10	170	3 7 E	1 52 E 4
41	"	...	"	"	"	.635	1.081	10	...	...	300	1 36 E	1 17 E 4

Ref. No.	Star,	Observed Magnitude.	Approx. Place of Star. R. A. h m o '	Fraction of Year.	Position Angle.	No. of Obs.	Distance.	No. of Obs.	M. g. Power.	Hour-Angles. h m	Weight, 1 to 5.
42	γ Cor. Aust.	...	18 59	37 13	.638	178.1	10	...	300	1 34 E	1 6 E
43	"	...	"	"	.643	177.3	10	...	300	1 44 E	1 24 E
44	"	6, 6	"	"	.739	174.7	10	...	300	1 42 W	1 54 W
45	"	6, 6	"	"	.739	...	1.48	10	170	2 26 W	2 38 W
46	"	"	"	"	.742	...	1.57	6	170	1 28 W	1 37 W
47	"	6, 6	"	"	.745	...	1.52	10	170	2 0 W	2 15 W
48	"	6, 6	"	"	.745	174.5	10	...	300	2 40 W	2 59 W
49	"	6, 6	"	"	.745	175.0	10	...	300	3 1 W	3 12 W
50	"	"	"	"	.747	175.3	10	...	300	1 29 W	1 42 W
51	"	"	"	"	.750	176.3	10	...	300	1 54 W	2 3 W
52	"	6, 6	"	"	.758	175.7	10	...	...	2 32 W	2 47 W

Remarks.

Nos. 1, 2, 4, 5, 6, 9, 10, 21, 22, 26, 27, 31, 33, 34, 39, 40, 43, 44, 45, 46, 47, 48, 49, 50, 52. The line joining the observer's eyes was parallel to that joining the components.

Nos. 7, 8. The driving clock acted badly, and the measures were difficult.

Nos. 11, 13, 14, 15, 16, 17, 18, 19, 26, 27. Observations during sunlight.

No. 28. Large star pale red and companion pale blue.

Nos. 28, 29. Direct distances deduced from observed differences of declination and an assumed position-angle.

No. 33. Components equal and bluish.

No. 39. The preceding component probably the brighter.

Windsor, N. S. Wales :
1892 January 22.

Nos. 1, 2, 4, 5, 6, 9, 10, 21, 22, 26, 27, 31, 33, 34, 39, 40, 43, 44, 45, 46, 47, 48, 49, 50, 52. Components equal.

Nos. 9, 10. South component slightly the brighter.

Nos. 23, 24. Observations in twilight.

No. 35, 36. The following star probably the brighter.

Maxima and Minima of Variable Stars Observed during the Years 1889, 1890, and 1891. By John Mitchell.

The following results have been derived from observations made with an achromatic of 3·5 inches aperture, using constantly an eyepiece of low power.

The mode of observation has been to compare the variable with stars differing little from it in brightness, and whose magnitudes had been kindly supplied to me by Mr. Baxendell, who, I believe, determined some of them himself, and obtained the remainder from his late father and the late Mr. Pogson.

R Cygni.

Maximum: 1889 Oct. 9; mag. 7·1

S Ursæ Majoris.

Maximum: 1889 Sept. 15; mag. 7·6

Minimum: 1890 Jan. 1; „ 12·35

Maximum: 1890 Apr. 18; „ 7·6

Minimum: 1890 Aug. 20; „ 12·25

Minimum: 1891 Apr. 2±; „ ?

Maximum: 1891 July 13; „ 7·75

Minimum: 1891 Nov. 10; „ 12·45

T Ursæ Majoris.

Maximum: 1890 June 3; mag. 7·1

Maximum: 1891 Nov. 1; „ 7·85

Observations have been made as follows:—

R Cygni. U Geminorum. S Ursæ Majoris. T Ursæ Majoris.

In 1889	30 nights.	...	26 nights.	13 nights.
„ 1890	26 „	...	40 „	31 „
„ 1891	30 „	12 nights.	58 „	42 „

Brockholes, Huddersfield:
1892 February 25.